BRUHAT BENGALURU MAHANAGARA PALIKE

Yelahanka Division

Name of Work :Improvements to Roads & Construction of RCC drains & Culverts at Muneshwara layout in Ward no-03

	Job code:			Est .Cost Rs.			200.00	Lakhs	
Sl No	Description of Items	Unit	No	L	B	D	Qty	Rate	Amount
1	KSRRB 300-3. Earthwork excavation by manual means in ordinary soil invoiving in average horizontal throw up to 2m & an average lift upto 1.5m , excavated surface leveled & sides neatly dressed , the disposed earth to be levelled neatly after breaking of clods complete as per specification MORTH/ Chapter 3. Page No. 142/ Item No. 19.1/ PWD SR 2018-19								
	Muneshwara layout		2	142.00	1.20	0.90	306.72		
	Cross road		2	70.00	1.20	0.90	151.20		
	1st cross road		2	50.00	1.20	0.90	108.00		
	2nd cross road		2	50.00	1.20	0.90	108.00		
	3rd cross road		2	50.00	1.20	0.90	108.00	ND	
	4th cross road		2	50.00	1.20	0.90	108.00	ND	
	5th cross road		2	250.00	1.20	0.90	540.00	ND	
	7th cross road (Thirumala nagara)		2	140.00	1.20	0.90	302.40		
	Basic Rate	130.00					1732.32	233.20	403977.02
	Loading & unLoading	57.00							
	Add for lead for earth (1.28 Tonne / Cum) 16km	38.40							
	Area Weightage @ 6%	7.80							
		233.20							
2	KSRB 4-1.2 : Providing and laying in position plain cement concrete of cum mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @0.892cum and fine aggregates @0.465cum machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. KBS 4.1,4.2 (Page No.13, I.No.4.2 of KPWD SR 2018-19)								
	Bed Concrete								
	Muneshwara layout		2	142.00	1.20	0.15	51.12		
	Cross road		2	70.00	1.20	0.15	25.20		
	1st cross road		2	50.00	1.20	0.15	18.00		
	2nd cross road		2	50.00	1.20	0.15	18.00		
	3rd cross road		2	50.00	1.20	0.15	18.00		
	4th cross road		2	50.00	1.20	0.15	18.00		
	5th cross road		2	250.00	1.20	0.15	90.00		
	7th cross road (Thirumala nagara)		2	140.00	1.20	0.15	50.40		
							288.72	5505.64	1589588.38
	Basic Rate	5194.00							
	Area Weightage @ 6%	311.64							
	Total	5505.64							
3	KSRB 4.2.2 : Providing and laying in position reinforced cement concrete of design mix M20 with OPC cement @ 320 kgs, with 20mm and down size graded granite metal coarse aggregates @0.878cum and fine aggregates @ 0.459cum, with superplasticiser @ 3lts confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15cms thick, vibrated for all works in foundation plinth and ground floor level for roof slabs, staircase, lintles, retaining walls, return walls, walls (any thickness). including attached plasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cill, fillet etc including cost of all materials, labour, HOM of machinery, curing, complete as per specifications. Specification No. KBS 4.1, 4.6 (Page 14/4.11) 2018-19								
	Walls								
	Muneshwara layout		4	142.00	0.15	0.75	63.90		
	Cross road		4	70.00	0.15	0.75	31.50		
	1st cross road		4	50.00	0.15	0.75	22.50		
	2nd cross road		4	50.00	0.15	0.75	22.50		
	3rd cross road		4	50.00	0.15	0.75	22.50		
	4th cross road		4	50.00	0.15	0.75	22.50		
	5th cross road		4	250.00	0.15	0.75	112.50		
	7th cross road (Thirumala nagara)		4	140.00	0.15	0.75	63.00		

Raft									
Muneshwara layout		2	142.00	0.90	0.15	38.34		
Cross road		2	70.00	0.90	0.15	18.90		
1st cross road		2	50.00	0.90	0.15	13.50		
2nd cross road		2	50.00	0.90	0.15	13.50		
3rd cross road		2	50.00	0.90	0.15	13.50		
4th cross road		2	50.00	0.90	0.15	13.50		
5th cross road		2	250.00	0.90	0.15	67.50		
7th cross road (Thirumala nagara)		2	140.00	0.90	0.15	37.80		
						577.44	5998.54	**3463796.94**
Basic Rate	5659.00							
Area Weightage @ 6%	339.54							
Total	**5998.54**							

4 KSRB 4-6.4 : **Providing and removing centering, shuttering**, strutting, propping etc., and removal of form work for vertical surface such as walls at any thickness, including attached pilasters, buttresses, plinth cills and string courses cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (Page 16/4.31) of KPWD S.R 2018-19

Muneshwara layout		8	142.00		0.75	852.00		
Cross road		8	70.00		0.75	420.00		
1st cross road		8	50.00		0.75	300.00		
2nd cross road		8	50.00		0.75	300.00		
3rd cross road		8	50.00		0.75	300.00		
4th cross road		8	50.00		0.75	300.00		
5th cross road		8	250.00		0.75	1500.00		
7th cross road (Thirumala nagara)		8	140.00		0.75	840.00		
						4812.00	379.48	**1826057.76**
Basic Rate	358.00							
Area Weightage @ 6%	21.48							
Total	**379.48**							

5 KSRB 4.9.2 : Providing **T.M.T Fe 500 steel** reinforcement for R.C.C. work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured & paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. KBS 4.6.3(P-18/4.46.2)

For Drain	**Ton**							
Total RCC Quantity =	Cum					577.44		
For 1 Cum = 60	Kg					60.00		
	Kg					34646.40		
						34.65	75223.96	**2606239.41**
Basic Rate	70966.00							
Area Weightage @ 6%	4,257.96							
Total	**75223.96**							

2606510-21

Providing & laying precast drain cover slab of 100 mm thickness in CM 1:3 including cost of all materials, labour, curing, transportation, loading, unloading etc, complete as per the directions of the Engineer In Charge.(1.20 x 0.60 x 0.10)Data rate

	Sqm							
Muneshwara layout		2	142.00	0.90		255.60		
Cross road		2	70.00	0.90		126.00		
1st cross road		2	50.00	0.90		90.00		

6	2nd cross road		2	50.00	0.90		90.00		
	3rd cross road		2	50.00	0.90		90.00		
	4th cross road		2	50.00	0.90		90.00		
	5th cross road		2	250.00	0.90		450.00		
	7th cross road (Thirumala nagara)		2	137.00	0.90		246.60		
							1438.20	2095.00	**3013029.00**
	DATA Rate	2095.00							
	Total	**2095.00**							

KSRRB M300-14. Excavation for roadwork in all types of soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location to a lead of 1.00 km and complete as per specifications. MORTH Specification No.301(pg no-143,S.Lno-19.14)KPWD S.R 2018-19

7	**Road Work (cc road)**	Cum							
	cross road (connecting Road) (1.10)		1	92.00	3.00	0.30	82.80		
	cross road (gangadhara layout)		1	50.00	3.80	0.30	57.00		
							139.80	151.66	**21202.07**
	Basic Rate	41.00							
	Loading & unLoading	57.00							
	Add for lead for earth (1.28 Tonne / Cum) for 16km	51.20							
	Area Weightage @ 6%	2.46							
		151.66							

KSRRB M600-1. Construction of dry lean cement concrete mix CC1:5:10 with OPC cement @160Kgs, with 25mm and down sizegraded granite metal coarse aggregate at 0.86cum and fine aggregates @ 0.58cum Sub- base over a prepared sub-grade with (coarse and fine aggregate conforming to IS: 383) aggregate cement ratio not to exceed 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content not to be less than 160 kg/ cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver with electronic sensor, compacting with 8-10 tonnes vibratory roller, finishing and curing complete as per specifications.MORTH Specification No. 601. (P.No.174, I.No. 22.1 of PWD SR 2018-19)

9		Cum							
	cross road		1	92.00	3.00	0.15	41.40		
	cross road (gangadhara layout)		1	50.00	3.80	0.15	28.50		
							69.90	3800.10	**265626.99**
	Basic Rate	3585.00							
	Area Weightage @ 6%	215.10							
	Total	**3800.10**							

KSRRB M600-2. Cement Concrete Pavement :- Construction of un- reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with 25mm and down size graded granite metal coarse aggregate with superplastisizer at 3lts conforming to IS 9103-1999 reaffirmed 2008, (Coarse and fine aggregate conforming to IS.383) mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a fixed form or slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints including groove cutting charges, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades as per drawing complete as per specifications. MORTH Specification No. 602 - with M30 @ 360 Kg/cum Cement, C.A, 0.69 cum F.A. 0.46 cum (P.No.175, I.No. 22.2.2 of PWD SR 2018-19)

10	**cc road**								
	cross road	Cum	1	92.00	3.00	0.15	41.40		

	cross road (gangadhara layout)			1	50.00	3.80	0.15	28.50		
								69.90	5849.08	**408850.69**
		Basic Rate	5518.00							
		Area Weightage @ 6%	331.08							
		Total	**5849.08**							
11	Vaccum de-watering with vaccum pump and suction mat and . compaction with skin floater clubbed with floating disc including cost of generator, HOM of machinery, Screed Vibratory, Power Floater, blade and disc etc., with all lead and lift. (P.No.176, I.No. 22.7 of PWD SR 2018-19)									
	cc road	Sqm								
	cross road			1	92.00	3.00		276.00		
	cross road (gangadhara layout)			1	50.00	3.80		190.00		
								466.00	72.08	**33589.28**
		Basic Rate	68.00							
		Area Weightage @ 6%	4.08							
		Total	**72.08**							
12	KSRRB 500-2. Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatment including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH / Chapter 5 Complete with all lead and lift and as per the direction of the Engineer-in-Charge.Page No. 158/ Item No. 21.2/ PWD SR 2018-19									
		Sqm								
	Muneshwara layout			1	142.00	5.00		710.00		
	Cross road			1	70.00	5.00		350.00		
	1st cross road			1	50.00	5.00		250.00		
	2nd cross road			1	50.00	5.00		250.00		
	3rd cross road			1	50.00	5.00		250.00		
	4th cross road			1	50.00	5.00		250.00		
	5th cross road			1	250.00	5.00		1250.00		
	New Road									
	7th cross road (Thirumala nagara)			1	230.00	7.90		1817.00		
								5127.00	**5.30**	**27173**
		Basic Rate	5.00							
		Area Weightage @ 6%	0.30							
		Total	**5.30**							
13	KSRRB M300-14. Excavation for roadwork in all type of soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location to a lead of 1.00 km and complete as per specifications. MORTH Specification No.301 Complete with all lead and lift and as per the direction of the Engineer-in-Charge. Page No. 143/ Item No. 19.14/ PWD SR 2018-19									
		Cum								
	Muneshwara layout			1	142.00	2.00	0.30	85.20		
	Cross road			1	70.00	2.00	0.30	42.00		
	1st cross road			1	50.00	2.00	0.30	30.00		
	2nd cross road			1	50.00	2.00	0.30	30.00		
	3rd cross road			1	50.00	2.00	0.30	30.00		
	4th cross road			1	50.00	2.00	0.30	30.00		
	5th cross road			1	250.00	2.00	0.30	150.00		
	New Road									
	7th cross road (Thirumala nagara)			1	230.00	7.90	0.30	545.10		
								942.3	**138.86**	**130847.78**
		Basic Rate	41.00							
		Loading & unLoading	57.00							
		Add for lead earth (1.28 tonne/cum) for 15km	38.40							
		Area Weightage @ 6%	2.46							
		Total	**138.86**							

14 KSRRB M400-17. Providing, laying, spreading and compacting crushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed method of tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications. MORTH Specification No. 406 Page No. 155/ Item No. 20.18/ PWD SR 2018-19

	Cum							
Muneshwara layout		1	142.00	2.00	0.15	42.60		
Cross road		1	70.00	2.00	0.15	21.00		
1st cross road		1	50.00	2.00	0.15	15.00		
2nd cross road		1	50.00	2.00	0.15	15.00		
3rd cross road		1	50.00	2.00	0.15	15.00		
4th cross road		1	50.00	2.00	0.15	15.00		
5th cross road		1	250.00	2.00	0.15	75.00		
New Road								
7th cross road (Thirumala nagara)		1	230.00	7.90	0.15	272.55		
						471.2	**2001.28**	**942903.07**
Basic Rate	1888.00							
Area Weightage @ 6%	113.28							94300
Total	**2001.28**							

15 KSRRB M500-6. Providing and applying primer coat with S.S. bitumen emulsion on prepared surface of granular base such as WMM ,including clearing of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per Specifications. MORTH Specification No. 502 Complete with all lead and lift and as per the direction of the Engineer-in-Charge. Page No. 161/ Item No. 21.6/ PWD SR 2018-19

	Sqm							
Muneshwara layout		1	142.00	2.00		284.00		
Cross road		1	70.00	2.00		140.00		
1st cross road		1	50.00	2.00		100.00		
2nd cross road		1	50.00	2.00		100.00		
3rd cross road		1	50.00	2.00		100.00		
4th cross road		1	50.00	2.00		100.00		
5th cross road		1	250.00	2.00		500.00		
New Road								
7th cross road (Thirumala nagara)		1	230.00	7.90		1817.00		
Basic Rate	34.00					**3141.0**	**36.04**	**113201.64**
Area Weightage @ 6%	2.04							
Total	**36.04**							

16 KSRRB 500-11. Providing and laying bituminous macadam on prepared surface with crushed coarse aggregates as per design mix formula for base / binding course including loading of aggregates with F.E. loader, hot mixing of stone aggregates and bitumen in hot mix plant, transporting the mixed material in tipper to paver and laying mixed materials with paver finisher to the required level and grade, rolling by smooth wheeled, vibratory & tandem rollers to achieve the desired density, but excluding cost of primer / tack coat & including lead, lift and cost of all materials, labour, HOM complete as per specifications.
Clause 504 of MORTH V revision Item No. page no 159. 21.11/ PWD SR 2018-19

	Cum							
Muneshwara layout		1	142.00	2.00	0.05	14.20		
Cross road		1	70.00	2.00	0.05	7.00		
1st cross road		1	50.00	2.00	0.05	5.00		
2nd cross road		1	50.00	2.00	0.05	5.00		

3rd cross road		1	50.00	2.00	0.05	5.00		
4th cross road		1	50.00	2.00	0.05	5.00		
5th cross road		1	250.00	2.00	0.05	25.00		
New Road								
7th cross road (Thirumala nagara)		1	230.00	7.90	0.05	90.85		
						157.1	6239.16	979860.08
Basic Rate	5886.00							
Area Weightage @ 6%	353.16							
Total	**6239.16**							

980172.04

KSRRB 500-7. Providing and applying tack coat using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH/Chapter 5 Page No. 158/ Item No 21.7/ PWD SR 2018-19

	Sqm							
Muneshwara layout		1	142.00	5.00		710.00		
Cross road		1	70.00	5.00		350.00		
1st cross road		1	50.00	5.00		250.00		
2nd cross road		1	50.00	5.00		250.00		
3rd cross road		1	50.00	5.00		250.00		
4th cross road		1	50.00	5.00		250.00		
5th cross road		1	250.00	5.00		1250.00		
New Road								
7th cross road (Thirumala nagara)		1	230.00	7.90		1817.00		
Basic Rate	14.00							
Area Weightage @ 6%	0.84					**5127.0**	**14.84**	**76084.68**
Total	**14.84**							

17

KSRRB M500- 19. Providing, laying bituminousConcrete using 40/60 TPH capacity H.M.P with Mechanical paver Gr-II(30mm to 45mm), crushed aggregates of specified grading premixed with 5.4% VG 30 grade bituminous binder and filler , transporting the hot mix to work site , laying to the required grade,level and alignment, rolling with wheeled , vibratory and tandeem rollers to achieve the desired compaction as per MORTH Table-500.9 including all leads and lift cost of all materials, labour, HOM of machineries complete as per specifications MORTH Specification No.509 Complete with all lead and lift and as per the direction of the Engineer-in-Charge. Page No. 162/ Item No. 21.23.4/ PWD SR 2018-19

	Cum							
Muneshwara layout		1	142.00	5.00	0.04	28.40		
Cross road		1	70.00	5.00	0.04	14.00		
1st cross road		1	50.00	5.00	0.04	10.00		
2nd cross road		1	50.00	5.00	0.04	10.00		
3rd cross road		1	50.00	5.00	0.04	10.00		
4th cross road		1	50.00	5.00	0.04	10.00		
5th cross road		1	250.00	5.00	0.04	50.00		
New Road								
7th cross road (Thirumala nagara)		1	230.00	7.90	0.04	72.68		
Basic Rate	7778.00							
Area Weightage @ 6%	466.68					**205.1**	**8244.68**	**1690818.97**
Total	**8244.68**							

18

1690987.87

19	KSRRB M800-13.Road Marking with Hot Applied Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface:- Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803 Road No: R82 - 24.15									
		Sqm								
	Muneshwara layout		2	142.00	0.10		28.40			
	Cross road		2	70.00	0.10		14.00			
	1st cross road		2	50.00	0.10		10.00			
	2nd cross road		2	50.00	0.10		10.00			
	3rd cross road		2	50.00	0.10		10.00			
	4th cross road		2	50.00	0.10		10.00			
	5th cross road		2	250.00	0.10		50.00			
	New Road									
	7th cross road (Thirumala nagara)		2	230.00	0.10		46.00			
	Muneshwara layout		1	71.00	0.10		7.10			
	Cross road		1	35.00	0.10		3.50			
	1st cross road		1	25.00	0.10		2.50			
	2nd cross road		1	25.00	0.10		2.50			
	3rd cross road		1	25.00	0.10		2.50			
	4th cross road		1	25.00	0.10		2.50			
	5th cross road		1	125.00	0.10		12.50			
	New Road									
	1st cross road		1	115.00	0.10		11.50			
	Basic Rate	429.00					223.0	454.74	101407.02	
	Area Weightage @ 6%	25.74								
	Total	454.74								
								Sub Total	17694253.88	
	GST 12%								2123310.47	
	Project Management Consultancy 0.5%								88471.27	
	Detailed project report 0.5%								88471.27	
	Miscellaneous and unforseen Charges								5493.11	
								Total	20000000.00	

CERTIFICATE

1 The Work spot has been inspected and the work found to be necessary
2 The Estimate is prepared as per the PWD SR 2018-19
3 The Provision made in estimate are adequate and essential
4 This area comes under BBMP limits.

CIVIL QUALITY CONSULTANTS & ENGINEERS Consultantore Bangalore

Asst Engineer
Ward No-03

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ವಲಯ ಉಪವಿಭಾಗ.
ಬಿ.ಬಿ.ಎಂ.ಪಿ, ಬೆಂಗಳೂರು-106
Asst Executive Engineer
Yelahanka Zone Sub-Division
BBMP

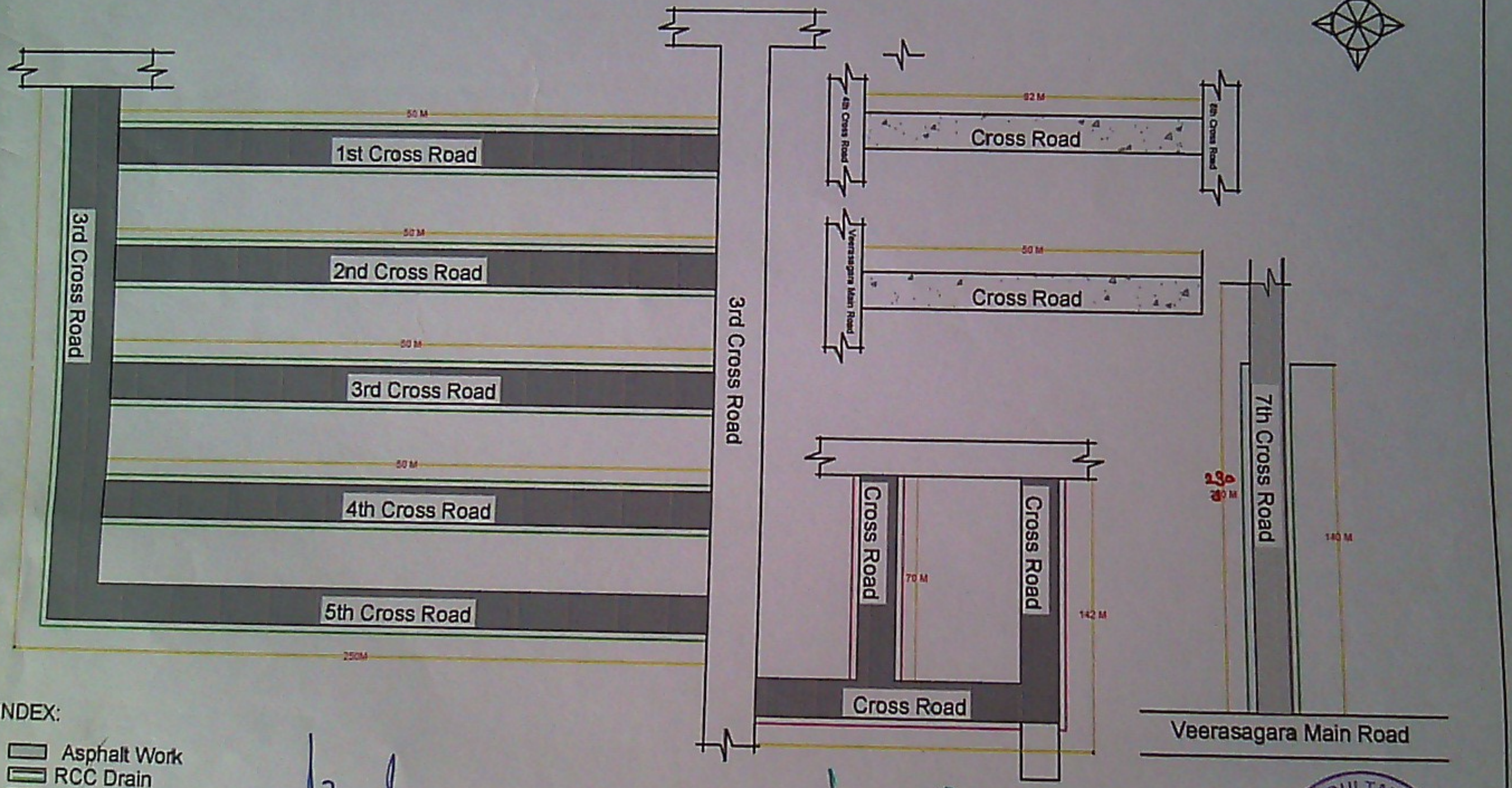
Executive Engineer
Yelahanka Division
BBMP

Administrative Sanction for Rs. 300.20
..... Three Crores only .....
is accorded under head ...P...2415.....
..... Re-Active fund for .....
..... T and P .....
Registered as CE No. ..... Subject to conditions contained in enclosed memo No EE/YNK/AS/39/2020-21 Dt. 18.9.2020

Technical Sanction
Accorded For Rs.200.00 Lakhs only
Head of A/C P.2415.....
CER NO :.....164..... Dt:.. 10.12.2018

TA — CE (YNK)

Name of work : Improvements to Roads and Construction of RCC Drain and Culvert at Muneshwara Layout n ward no. 03



INDEX:

- Asphalt Work
- RCC Drain
- New CC Road
- New Rcc Drain

Assistant Engineer

Assistant Executive Engineer
ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ,
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106

CIVIL QUALITY CONSULTANTS & ENGINEERS
Bangalore